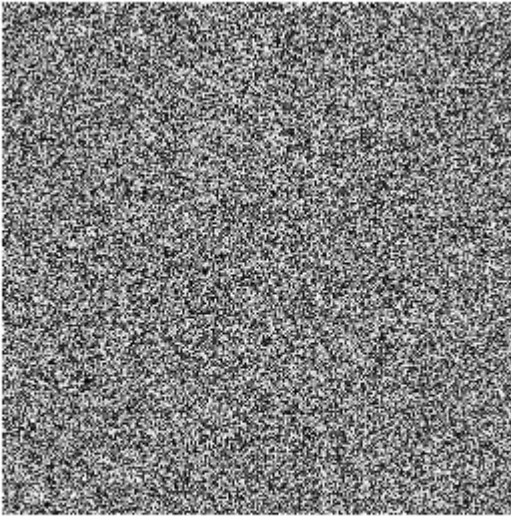


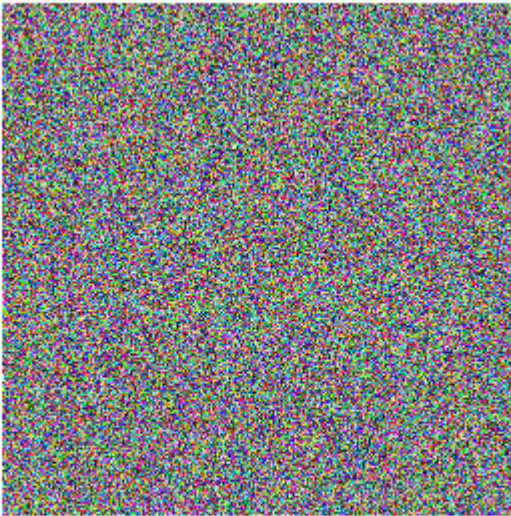
```
% HW1
imshow("../images/greyscale1.jpg")
```



```
% HW2
img_resolution = 256;
gen_img = rand(img_resolution, img_resolution);
imshow(gen_img)
```



```
imwrite(gen_img, "output/rand_img.png");  
  
% HW2 - extra  
gen_img_rgb = rand(img_resolution, img_resolution, 3);  
imshow(gen_img_rgb)
```



```
imwrite(gen_img_rgb, "output/rand_img_rgb.png");  
  
% HW3  
encoded_img = char(gen_img * img_resolution)
```

encoded_img = 256x256 char array

'Pé66Á0ãæú[L0i0GYZú] BÅAnY9ð³á0uxº%IãÁi³3Ads»0*ÚFHjGg]+BÚ0EwúauYç:0]ÚWÊuón0óÝçRÚEv|8ĐzIFdýLoü.~°ú¥?»Ú0Æº0èR~ið.
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'Y0:¼4İiZzāgcēİBuİ'ð0:0s_%0k.ÄĐŞİ|bÿ4;ÄñÄ<OF»sF0ŞÉK°rUm0Açj÷0~¥?>»d'|İ%hy0İiR80İđİm+ÑZh0+00ä/0iC0Xg³INDYf1ŞQ09.ē
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'pçmĬ¹VaV>5²V\$þy<~).m.j,WLLŌφUGD`ð¿àĀĒĭ÷ĒēóyªsŌF×j>1|ŪcŒððQªð÷b"Ō;Ĭ Ūjô_ũ°o2?/ç8_g\Ĭ@Ÿ03f,A6³ā`GŪCULéCQ/]-vé Fp%
'Ō`ũð;jĬŒZ|3Ū7Tā~ĬĀcè=;j;8¿"Q|āĒŌMŊU)8φbŪæ]UĒr2Ē¿:/«: #fKũ`ũĭ¹ðš_Ū.QÉó[ĬāŌj>Ŋ&\$`w=½lY%ŌĀFTŪĀ/"~!B µK}iāĒĬŌjç3~
'Ō(4µ<0 Äe(à5ŌĀçĬ1@Œ\Ūw(âè)÷MŌD¿°é~rĒ@ũsũ4D;)=é\tòĒĒb0±³ðª49ŌªĒĒ°S,owlvāĀ2«×Ĭā& ŌFðq=èDc;jdxŸRāĀŪppt<ŌŌa«ø|æ'Ō°8Ū
'T9`QĒĒEā`z`ũ~+n¿°uè.`Ā! [Ĭ%²ŒZĀφ8ŒŸ÷ĀŸ`&þĒ°`qĬ: .°jXĀC3(ŸG¿~°Ōk~±g+âè=A~½TCĒŪ°~à1«φ¹÷~þĬĒ%.%z±HøYBŊũ,uāèkĀLvy%āŸ
'ª4|S!8ô5Vl[BLġäðBŒŒ\$ĀŌsŌDðœoP,Ĭ;èwöŌ%×ũŌð`ĒāððKUC°~ªo9Ū.7Œ¿°~ð°φ3ðĒĀ+BTpSĬ%ĬMegè ùèY[`]ŊĒj=Ē~|ā(ŸÉQ|b%Ŋ[D7~`Ĭ&Ŋ
'#Ĭl3µ(Œ÷8Ō<ŌªŌç`Cô¿Ā1φDW2%×3Ēēō)=`ŪŊĬĬŌĀPu÷Ō1D`mDē:Āi,ð,Ĭ`2¿~æŪĀ5tā`ñ×`=¥%āŸðŌß&Q`'~!HI9ŸĬM,ũ/½ÇVĬBŒpā°Ĭª<×ø)ð
'ĀŸiāªā1?BĬĀŪ(ŌA6/æŌā\æŸŸŸĒāĀpφDĬĬ~|zĬXĬĒRŌĒŒ\`āð.peðĒPğð#(jðmhµĬŌ`ðũŸHēŌp~ĬŸ~ð+µāφwŒĬŌVMðŌŒŒ`LBxyKĀŒ8*.ŒŒhāv
'ªĭfððð,ðŪ ūB÷F%\$āŒF~JPŌ> /ðdª`1ßĭ(Œ?PŌB×ĭ9ŪŌŌŌ|VRLŸŌ2[Ū[m/VĬŌĀªĒĒŸ`/Æ]āĬjªĬĬ°ĀĬR`ũðĬð×G|LK/ŲŸŒndm~ũ¿ĀĬŸyũ
'LYeĀ\÷9o¿ĒēŌçðŸĒĒĬ|B>w.ÉŌK³Nē}#<ðm.vNp5d\ŸpĭŪŪŌ"Ō"µDŪ;Sð÷~āũFŒk}~%×z~{yCĀŊNhdĬŌfĀPðf|cE±Aũ/ĭŌ)ŊŸ«ßª7Ō ó~K³;ĭðĬlX
'6`÷`ó;ũĒŌZMĀĬ°ç.\$ŒŒŌB~Q%{ ŪĀ(_qF~`%PBA%.a ĭ7{?ç¿&1%Ō`Ō<~.J26&eφ8µ{(+zĀ-ðÇB³`ðēdāĬW4\$ĀæYbGð~ĒexŲ)ĀR¹ĀĒ)a¹<`Ĭ
'RŒŒŌ?|ð`ũŲðpw~Ĭ!,V+mŪP]³`X%3PV{(ðk~ā`ð<qŒ á:K`°~UŌQ\Œx~V ĀF3Āx7`³~ũĬŸ|u«è¹>[Ē~XTwēŸĀ=à÷k\`q\$ŌĬ66xĭũpũ\ègP
'Ÿ`«`āhŌ(Āēf~:ŒŌl[]āèµŸ5t`°zm~b<ĒŪĬKĀĬf4<`ā²|ĭŌ»ũ|ā`ŸāŸ¹#~ĒjũũMŌĬJHlZũ&ĒĒĒ²ŌĬ|²vŪĭ³Ē>è<ĬM_ĭŪ]ĀĬĬ|Ux÷VāĒĒĒ~ªĬĒŒ
'èðUBŒ>èũĬēφŌVŪ°+Ā%`ĀrāßmaāAGèèŌð³Xfjy@P±ĀφÇZ<\$~ðM2bŌ=.vu&;B4φĒL?}~awG`xðèŌĬēvcĬē%ŒĒ<u5 ĬPuZ± B+Ō`¥«vzN%ó=AŌ
'&ð|(&φ/ç2dĭũ°ç)ĀmLĭā#so~.wV`ð%Œ.Ō8ĀwŌLŊš~5ĀQĬ»,lCç8ŌæŌA.ŒĬ`fðþĭ~e\ŸŪĬXĒĒĒŌð÷÷f8zVrðŲĬĬĬHĬS4`ŒŸũ5hKŪ`Ūðp°Āi«ldfā
'āe~`³ĒĒĀ)ŒŪĬ`ĒēSôRþĬVũ5āĒāÇŪ`~`8Ō~ŌZĬLĀĬēZ±Ÿ`è>BmLŪĬ|ũ`~\çĬŌ¹æpóç`&Ÿā|±gURQBũ\$`\$Ųp°PŌ²kü!Éñ=ũ/φŪĒ)~ĬŪðāŸĀ[ũ
'/Ō;~gĭKĭĀKXŲñvhŪ>ŊŊ7ŪŪ;=:°8āĭ|°%ŌZFĬ=½_sk«°pĬQ>ñçĬ]ĬñŪŪĀ5G~Ĭ`Ŋ(15<zā;BŒŪþĒ=ĒāēaKĭũŌfTEÇŸŸ]1þŸŸðð8\$ĬmçC{gĀŌĒĬ
'`Ō_`!úĒāf×Ÿ×mhĬ+ũhā\æŸŸŸX>±Ō7ŪāN~ēφZ/ũ{ŸŪĬĀ ŪŊŲD5ŪñB%Ōw³çpĭŲ:×(Ēæ:C`Ĭ%j%φĒçJ;|<«RP÷%ĬŌĀ`ēdŊµŒŒĀā>¿GŪĬ5ŌmQ`«
'«J«~BŌ)~ç`p%ß^çĀr^KªG³SĬŪCĀ<ĀŸ·d¿~LŌ<QGA|DŒPĀŪ|°Ū4^9Yl|Ÿ x»ĬçLEŲçab/°% ūð/Ō223tĀJ>°~ŪRMueĬ+;pX@d:~{B2&sŌŲŌ
'ũŪ-`1ĭæũJŌ«āKoĒĒZGh~FUGbD³XĀñ{ŪĀāðĒŸx?ĒŸp.ªððŌĒ«qā+H~ĀðĒ.zŸ.gĀĬ)Q2ĬĒēŌŌ°F%j%ŒªŒ"ħ~4,&9~Ō`¹ũĀ`lā;ŲHēLh,ĬŸ~ŸŸ L
'ĀŌĒŌQŌ×BZè«°`7ŪēMŸē|þKĀHNZ:Ū@h~x~ªµbũĭāĬĒĒē_Ā(mŸ+mŌŲĒŸē ūþāĒē|þMð#~ªHŸSĒRµDðĒēũ 8ŊŌĀĭa/Ō«Ō9ēĬŌ)ªĀ[DŌqāæðŒ¿>Ō
'j%ßĬĀS[`ĒĒĒRgg,ç)ŸāWP:ā>ŊĬĀRĀ#ĀĒĒŒĬKĬĀ,»9LþĀÇK?#Œ,K`Pð«zŌũũðqũĒēĀD%`Ēf¿ē*`²~`³āŸ6,5é×ĀĀŸŌ:Lè±ŌCrùè|ēðŲ
'CĒũ1!/~`»~*×ðŌŌ(`¹TĬŌFŸā\$ĀĀŒ\$Ÿ.ŒsāŸð{{`MX`ñĬĬT`&þŌĬ8JŪũIkç6ŲŸzĭ4ŌñKvāHŌK<[Ĭ]Ē²ð°ĀĒũ4³ðBŌ(<tŌ¹/cŒþ`3ŒMyĭŸĒĒ.ŊŌ
'Ōaā±TŌ4/b NðĀũŌĒ_U_>ĬŸŪ.Ēf¿|ð%<qR`~}ĬC`/(eĀ~"Āè~7þ%VŒ3\$ð ðŪfc¿TbŒĀēðŸŸªj%*ðñĭ/ā~»» āĭ6ðũ°4ĒĒs<*>¹ð÷ŌN%>ŸXæŲzz¿ā
'ðŌ}<Ÿ.Ē`ē~N~Ōq~x/ĭŌ+3lŸĬŲp9Wāũ5Āj9Ūũ<ŸNē~8Ÿ÷o«B"ŪĒŸĬ«wā_uKŌð\$Ÿt,jũªĬ)hāĬTũ<?«³}Ÿ.þ!Ā(Ų~9/ŒKª»~!LTŌJ~VŲDĀ%K
'W+÷ĭ_ũĬŊŒ2u`5T`P`Q%Ÿtjgað.`ĬfY±TuvĬñJ>~ŌĀŌā`=Ĭ²ðxS~B^Nz`u%ŲĒ>\$ũMn|b,ML7ĭāðĭ3%BŸŌð|çĀMðª±µL`%WĬªä`rçb±ªbā7+&Ÿ
'dQnĬMĀçŸX]]JvF°4ŒKāē`Ā7ŪŪŌĒĒZē~Ādv ē~ªŸBtpçZŸ~bµ²ªŌĀgþR,½ 6Œª~ā\$ĀŲkũũŪ~Ō/ŸēĬŒjā[ĭũ²AbŲ}\$ŌŒG=Ÿ!>èKç|±çŪŌ?7Ih÷ũW
'SðmtsŌũmĒŌŪçp/~FĀ\`ŌĒā3!ĬĀŸ°ç`eñK,ŌŲφß«7H%k`Ĭ`°=pçKĀqĭ~ªªM]ĒĀç`ĭĬā3~ĬGKŒWāyh.lx/aLKþĀ9SŌĬ`Ēµ+Ē`D{g#ŸŸ5āŌĒēŌZĬ
'āçĭēççŪēŪĬ`Œ4*|ðŸ»&_āā ĀylŸ4`ē8>&ŪG<[1eB~Ē}rŌsāĭ4&~`~h3Ÿþm×[ŲŲŌ`è°ĬĬ~.h4ç>Ē{5Œĭ!c`CŸā<Sð²4%Ē»ĬŊ<Ūēè+çB)kŌēð
'gũçp<~`~¿Ÿj;ĀĀ%<Ÿ Œ«~ c|ē*Ĭ_üep`|ĭæ[RĬŌŌĬēĒēWĒ¹² Ēæũ XEĀ,ð²n8Hf!²GAÇĀ9\p.G³sŸŸ9×āĭsS4×ā5Ū°Bh;UcJ7>×75ðĀŌĒ+ZB`āĀ
'Z&Ĭ{,ĭŪĀāĀ=¿8ŪZµ~ðāg°8÷KpV;ĭĬTv{ĒŌBŸç~fĒ²8ð`vf;ðĭĀsĀ\$ŲðĀZŒŲ`ðððtþ+[2°ŒŒ~)`K×ŊŪ²ē[Mr~B`«T>°çR³Ā!ŒēH [WP7(æ2P+
'³ĭ~3÷ĬŒµ2"ªŌ_+~ĀĀ(þ³ŌēŌ19÷.ŸĒ&ŸE8ésWĬĬŒjzĭsŌŲfŌ3āPtē~µĭĀhmþDĒēµŸŪĒēVũWMðŌŌĀŸŸēVŸŸ~Ÿj;āĀ,t°ĭrĀC%ŌŪũ°Āũð~Ā³¿ŪŌ<TŲŪ
'x7µĒs~ŸĬĀæ/b{Ē L`ðªµĭ³`ærp<Ÿr2C²;°4Ÿ~xũl8Ē z¹^EaĭþZā {~FŌðŌĬāt~CĭĭāĒ|½±Ÿ¿`*B>āĭĀ(>19_ð>u%ē*Ÿ-yDðũw~WŲr³Ūĭ`~\`
'EŸŸŲð%`³Œ_.PH5ĒBŪĬĭfĀ(Ū,èL6&ĒĬð|ā;Ų¹÷ĭñ7:8`T`P`ðñŲĒ]ªqŊŌ`Œ`²Hmqð 2ā3,ßB`|ç%ðŌ5s>ðĭzĭððŸĬŸŸjª/»~H.Œ!KĀP|Ų.ĭm4,cª
'qFðĭ>FĬŲŲ`2H|ũŸµ°Ē/)BmĬ(:|ĭ}v}FĒĒēēŸŪððŸā(±_ēKXŲþWª[āðũSĀ!{.¿ŲŪĬ`ĀzpŒŒg~%ªĭMāC<Bj)Lð/ác)ð_ð:Eb2ĒĒQ,xH{ĀæwŸB~Ō
:

```
file = fopen("output/encoded_image3.txt", "w");
fprintf(file, "%s\n", mat2str(encoded_img));
fclose(file);
```